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August 2001

Kuwait

Kuwait contains 96.5 billion barrels of proven oil reserves (including its share of the Neutral Zone), or roughly 9% of the world's total oil reserves. Along with Saudi Arabia and the United Arab Emirates, Kuwait remains one of the few oil producing countries with significant excess oil production capacity.

Note: Information contained in this report is the best available as of August 2001 and can change.



BACKGROUND

As one of the world's leading oil producing states, Kuwait's economy is heavily dependent on [oil revenues](#). With the rebound in oil prices since late 1999, Kuwait has reaped a revenue windfall. Kuwait recorded a record trade surplus in 2000, and also large budget surpluses (of around \$5-\$6 billion) in fiscal years 1999/2000 and 2000/2001. For 2001/2002, Kuwait is forecasting a budget *deficit* of around \$6 billion, but this assumes oil prices of only \$15 per barrel. Currently, Kuwait is receiving around \$23-\$25 per barrel for its oil, and if this continues, Kuwait is likely to experience a significant budget surplus once again. Kuwait's real gross domestic product (GDP) growth for 2000 was estimated at about 5.5%, with forecast real growth of 4.0% for 2001. This follows real GDP growth of only 2.1% in

1999, and a *decline* of 10.5% during the slump in oil prices in 1998.

The period of low oil prices in 1998 and early 1999 spurred the Kuwaiti government to move towards reducing government subsidies, which provide many services to Kuwaiti citizens at little or no cost. Even with the recent rise in oil prices, these efforts have continued. Kuwait hopes to attract additional foreign investment, and as part of this effort is considering a reduction in the income tax cap on non-Kuwaiti companies from 55% to 25%. Kuwait has started a program to privatize state-owned businesses (outside the oil sector) as a way of reducing subsidies. As part of this program, the Kuwaiti

government has begun privatizing health care, electricity, and telecommunications assets. Privatization is complicated by the need to protect the jobs of Kuwaiti citizens, who traditionally have been employed mostly (93%) by state-owned enterprises and the government. Overall, though, the government is attempting to reduce its involvement in the economy, reducing its budget deficit by cutting subsidies and increasing revenues. In March 2001, the government introduced an economic reform package which, among other things, eases restrictions on foreign banks, provides long-term protection to foreign investors against nationalization or confiscation, and eliminates the requirement for foreign companies to have a Kuwaiti sponsor or partner.

In the oil sector, the Kuwaiti constitution forbids foreign ownership of Kuwait's mineral resources, but the Kuwaiti government is exploring allowing foreign investment in upstream oil development under terms (see below for more details) which provide for per-barrel fees to the foreign firms rather than traditional production sharing agreements (PSA's). The idea is highly controversial in Kuwait, and thus far opposition in the Kuwaiti parliament has stalled the initiative.

Kuwait's foreign policy continues to focus on regional security issues. Since Operation Desert Storm in 1991, Kuwait has maintained close military cooperation with Western countries. In October 1994, the United States, the United Kingdom and other countries came to Kuwait's assistance after Iraq moved 70,000 troops and heavy armor close to the Kuwaiti border. In November 1994, Iraq officially recognized Kuwait's sovereignty, territorial integrity and political independence, as well as its borders as defined by the United Nations. Kuwait welcomed the move but continues to demand the release of all Kuwaiti citizens detained in Iraq and called for international sanctions against Iraq to be maintained until it was in compliance with all pertinent U.N. resolutions. In April 2001, Kuwait's cabinet agreed to a joint Gulf Cooperation Council (GCC) defense pact. The security arrangement requires parliamentary approval.

On September 28, 2000, the United Nations Compensation Commission, which handles claims for reparations arising from Iraq's 1990 invasion of Kuwait, approved a \$15.9 billion compensation claim by Kuwait for lost oil production and damage to oil reserves, oil wells, and other equipment and facilities caused by Iraqi actions. At the same time, the proportion of revenues from Iraqi oil sales under the "oil for food" program which are used for payment of claims was reduced from 30% to 25%. Iraq condemned the decision, but stated that it would not halt its oil exports, as had earlier been feared.



OIL

Kuwait contains an estimated 94 billion barrels of proven oil reserves, more than 9% of the world total. The Neutral Zone area, which Kuwait shares with Saudi Arabia, holds an additional 5 billion barrels of reserves, half of which belong to Kuwait. Most of Kuwait's oil reserves are located in the 70-billion barrel Greater Burgan area, which comprises the Burgan, Magwa and Ahmadi structures. Greater Burgan is widely considered the world's second largest oil field, surpassed only by Saudi Arabia's Ghawar field, and has been producing oil since 1938. Kuwait's Raudhatan, Sabriya, and Minagish fields have large proven reserves as well, with 6 billion, 3.8 billion, and 2 billion barrels of oil, respectively. All of these fields have been producing since the 1950s. They generally contain medium to light crude oil with gravities in the 30°-36° API range.

The South Magwa field, discovered in

1984, is estimated to hold at least 25 billion barrels of light crude oil with a 35°-40° API gravity. In November 2000, Kuwait announced the discovery of significant amounts of light crude oil at Sabiriyah.

Another Kuwaiti field -- Ratqa -- has been the subject of controversy. Once thought to be an independent reservoir, Ratqa is actually a southern extension of Iraq's super-giant Rumaila field. During the weeks preceding Iraq's August 1990 invasion of Kuwait, Iraq had accused Kuwait of stealing billions of dollars worth of Rumaila oil, and had refused to negotiate a sharing or joint development arrangement for Ratqa and southern Rumaila. After the Gulf War of 1991, a United Nations survey team made a demarcation of the border between Iraq and Kuwait, and this demarcation put all 11 of the existing wells at Ratqa within Kuwaiti territory. Despite this, in September 2000, Iraq renewed accusations it has made previously that Kuwait was "stealing" its oil. Iraq claimed that Kuwait was doing this through horizontal drilling on fields straddling the border between the two countries, and that Iraq was losing \$3 billion per year worth of oil. Kuwait denied the charges.

Kuwait Petroleum Corporation (KPC) also has been conducting seismic survey work on its largest island, Bubiyan, near Iraq. The initial data is considered promising, and exploratory drilling is planned.

Current Oil Production

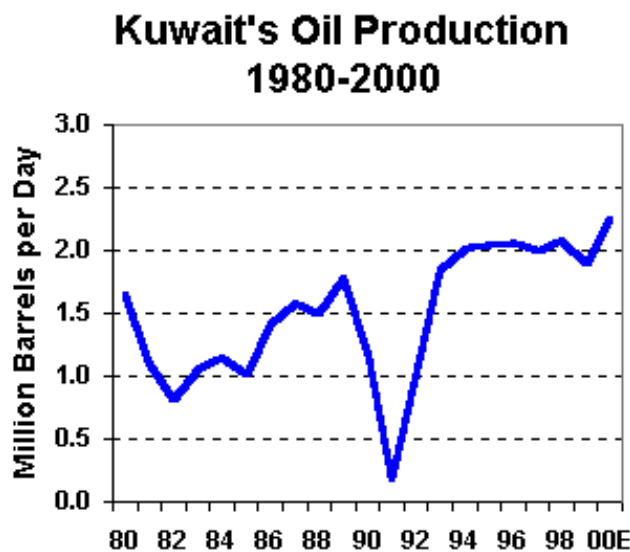
The bulk of Kuwait's oil production occurs at the onshore Greater Burgan field, whose Burgan, Magwa, and Ahmadi structures produce roughly 1.6 million barrels per day (bbl/d) combined. Kuwait's other main producing fields include Raudhatan (225,000 bbl/d), Minagish and Umm Gudair (140,000 bbl/d combined), and Sabriyah (95,000 bbl/d).

Construction of new gathering centers is a major focus of Kuwait's upstream capacity expansion program. Prior to the Iraqi invasion in 1990, Kuwait had 26 gathering centers (GCs), with a total capacity of 4 million bbl/d. All 26 GCs were either damaged or destroyed during the war. By 1993, operations at 18 GCs had been restored. In January 1996, KPC awarded China Petroleum Engineering Construction Corporation (CPECC) a \$390-million contract to build two new GCs, a significant step in Kuwait's efforts to increase its oil production. CPC and Kuwait Oil Company (KOC) constructed

the GCs, designated GC-27 and GC-28, at the Umm Gudair and Minagish fields, respectively. Work was completed in early 2001, three years behind the original schedule, mainly due to construction delays. The Umm Gudair GC has capacity of 190,000 bbl/d, and Minagish has design capacity of 210,000 bbl/d. The two facilities are part of Kuwait's plan to raise oil output from West Kuwait to more than 500,000 bbl/d (from 120,000 bbl/d previously), and overall production capacity to more than 3 million bbl/d (from around 2.5-2.6 million bbl/d currently). As of early July 2001, GC-27 was handling 80,000 bbl/d, and GC-28 about 100,000 bbl/d. In addition to these GC's, a 330,000-bbl/d water injection system is being installed at Minagish by Italy's Snamprogetti, to be completed in mid-2002. Currently, output from the two fields is around 140,000 bbl/d.

Crude Oil Exports

Kuwait exports the majority of its oil to Asian countries, especially Japan, but also refineries in South and Southeast Asia (India, Singapore, South Korea, Taiwan, Thailand, etc.). Other oil exports go to Europe and to the United States, which averaged 263,000 bbl/d of Kuwaiti oil imports during the first five months of 2001. This compares to the peak of 353,000 bbl/d (4.1% of U.S. oil imports) reached in 1993. Kuwait's export blend is 31°API (a typical medium Mideast crude), and is considered sour with 2.5% or greater sulfur content.



Kuwait has completed major renovations of Mina al-Ahmadi, the country's main port for the export of crude oil, virtually destroyed during the Gulf War. Kuwait also has operational terminals at Mina Abdullah (repairs completed in September 1992), Shuaiba (restored by late 1996) and at Mina Saud. A new terminal is planned for Bubiyan Island, which will handle increased production from northern and western Kuwait under "Project Kuwait" (see below).

Production Quotas

On July 25, 2001, OPEC oil ministers agreed to cut their production quotas for

the third time during 2001. As of September 1, 2001, Kuwait's crude oil production quota was set at 1.861 million bbl/d. During the first five months of 2001, Kuwait was producing about 2.1 million bbl/d of crude oil.

Plans to Expand Oil Production

Although it has undertaken production cutbacks this year in response to the period of low oil prices in 1998 and early 1999, Kuwait still aspires to increase its production capacity from the current 2.5-2.6 million bbl/d to 3 million bbl/d by 2005 and 3.5 million bbl/d by 2010. As part of this plan, known as "Project Kuwait" (see below for more details), Kuwait is considering permitting foreign oil companies to invest in upstream production, which would reverse more than two decades of Kuwaiti policy.

Kuwait's current policy, in place since 1975, limits the participation of foreign oil companies to providing technical assistance and construction and maintenance services under contracts, which pay them fixed prices for specific activities. In fact, Kuwait's constitution forbids the award of concessions which give an ownership interest in Kuwait's natural resources to foreign entities. Nevertheless, the government has repeatedly hinted at a desire to find a way to involve foreign oil companies in increasing production without violating the constitution. The Supreme Petroleum Council (SPC), which controls Kuwait's oil and gas sectors on a day-to-day basis, approved foreign cooperation in principle in 1997, but opening upstream activities to deeper involvement by foreign oil companies is highly controversial with opposition members of the Kuwaiti parliament. In February

2000, the Kuwaiti parliament passed a resolution calling on the government not to proceed with the program until legal issues involving foreign interests in the Kuwaiti oil sector were resolved. New legislation dealing with the foreign investment program is currently under consideration in the Kuwaiti parliament. Some in parliament have even accused the government of "selling off" the country.

The structure of the agreements the government is considering, called "Operating Service Agreements" (OSAs), unlike PSA's, allows the Kuwaiti government to retain full ownership of the oil reserves, control over oil production levels, and strategic management of the venture. Foreign firms are to be paid a "per barrel" fee, along with allowances for capital recovery and incentive fees for increasing reserves, in their role as service provider/contractor.

The fields which the Kuwaiti government intends to open to foreign investment are all currently operating fields in northern or western Kuwait, including Rawdhatain, Sabriyah, Ratqa, Bahra, Minagish, and Umm Gudair. Kuwait's largest field, Burgan, is to remain off-limits to foreign investment under the new plan.

"Project Kuwait" is a \$7 billion, 25-year plan, first formulated in 1997 by the SPC, to increase the country's oil production (and to help compensate for declines at the mature Burgan field), with the help of foreign oil companies. In particular, Kuwait aims to increase output at five northern oil fields -- Abdali, Bahra, Ratqa, Rawdhatain, and Sabriyah -- from their current 450,000 bbl/d to around 900,000 bbl/d within 5-10 years. To date, "Project Kuwait" has made little headway, in large part due to opposition and demands from parliament. Among other things, parliament would like to have details of OSAs submitted to it for debate and approval. Oil Minister al-Subeih was chosen in part because he has strong ties to parliament, particularly the Islamists, and it is hoped that he can help persuade them at least to moderate their opposition to "Project Kuwait." In April 2001, for instance, Subeih argued that the northern fields would suffer significant reservoir damage if foreign oil companies were not allowed to assist in their development. Shortlisted foreign oil companies for OSA's in Project Kuwait reportedly include BP, Chevron, Conoco, ExxonMobil, Lasmo, Shell, Texaco, and TotalFinaElf.

Sharply higher oil export revenues since 1999 have allowed the Kuwait government to undertake ambitious oil investment plans. In December 2000, Kuwait's Oil Minister said that the government would spend nearly \$8 billion on the country's oil sector in 2001, including around \$5.8 billion on KOC projects. Additional money is to be spent on upgrading export facilities, laying a pipeline from Kuwait's northern oilfields, and modernizing/upgrading oil refineries.

Neutral Zone

The Neutral Zone encompasses a 6,200 square-mile area partitioned equally between Kuwait and Saudi Arabia under a 1992 agreement. The Neutral Zone contains an estimated 5 billion barrels of oil and 1 trillion cubic feet (Tcf) of natural gas. Oil production in the Neutral Zone, which is over 500,000 bbl/d (around 370,000 bbl/d onshore, with the rest offshore), is exported from area terminals. Two joint ventures control oil production in the area.

Onshore, U.S.-based Texaco and KPC produce from the Wafra, South Fawaris, and South Umm Gudair fields. Offshore, the Arabian Oil Company (AOC) of Japan operates the Khafji and Hout fields, both of which are connected to Saudi Arabia's Safaniyah, the world's largest offshore oilfield. AOC has a 40% stake in the Kuwaiti portion, with the remaining 60% held by KPC. AOC lost its concession in the Saudi sector when it expired in February 2000. Kuwait's intentions on the issue of renewal for AOC (the 40-year concession expires in 2003) are unclear, although as of August 2001, Kuwait's oil minister al-Subaih was defending (to parliamentary critics) "preliminary" talks held with AOC, and AOC was saying that it would deal "flexibly" in its negotiations on renewal. Oil Minister Al-Subaih stated in July 2001 that any deal with AOC would "not include any kind of concession or participation in the oil wealth by any means." AOC sells around 78,000 bbl/d to Japan from its production in the Kuwaiti portion of the Neutral Zone. Some members of parliament were saying that

the talks were in violation of Article 152 of Kuwait's constitution, and that parliament was being kept in the dark.

Foreign Upstream Operations

Even though Kuwait's overall overseas investments are considerably smaller than before the 1990 invasion by Iraq, Kuwait holds equity interests in oil production in several countries through the Kuwait Foreign Petroleum Exploration Company (KUFPEC). KUFPEC is active in Algeria, Australia, China, Congo, Egypt, Indonesia, Pakistan, Thailand, Tunisia, and Yemen. Most of the interests are either small fields or minority stakes, though, and KUFPEC's revenues have been under \$200 million in recent years, making it a relatively minor part of Kuwait's state oil establishment. According to KUFPEC's 2000 annual report, the company is aiming to increase its production capacity to 100,000 bbl/d oil equivalent by 2010, up from 29,461 bbl/d oil equivalent currently.

Refining

Kuwait's refining capacity was damaged severely during Iraqi invasion and occupation in 1990-91. After losing most of its pre-war capacity of 820,000 bbl/d, Kuwait had only 200,000 bbl/d of refinery output by early 1992. Kuwait's \$400-million downstream reconstruction program was completed in mid-1994. At present, Kuwait's three domestic refineries have a combined capacity of around 772,800 bbl/d, nearly 100,000 bbl/d less than normal because of damage to Mina al-Ahmadi (see below), the country's largest refinery (with nameplate capacity of 427,500 bbl/d). Other large refineries include Mina Abdullah (247,000 bbl/d) and al-Shuaiba (190,000 bbl/d). The bulk of Kuwait's refined products are exported.

On June 25, 2000, the Mina al-Ahmadi refinery, owned and operated by KPC subsidiary Kuwait National Petroleum Company (KNPC), experienced an explosion and fire, causing substantial damage to two of three crude distillation units (CDUs), killing six workers, and reducing production capacity by over 100,000 bbl/d. The facility had to be completely shut down, with Kuwaiti authorities putting the cost of the damage at an estimated \$330 million. In December 2000, Kuwait awarded a \$300 million contract (to Fluor Daniel and Sunkyong) to rebuild Mina al-Ahmadi. In July 2001, Iraq claimed that "national resistance" groups in Kuwait had sabotaged the Mina al-Ahmadi refinery, as well as the al-Shuaiba facility, which is Kuwait's most modern refinery. As of early July 2001, Mina al-Ahmadi was operating at around 300,000 bbl/d. On August 20, 2001, *Reuters* reported that Kuwait was planning to spend "over \$3 billion" to upgrade its three refineries.

Foreign Downstream Operations

KPC is expanding its overseas downstream interests in the hopes of attaining a combined European and Asian refining capacity of 700,000 bbl/d in the next few years. KPC recently pulled out of a \$2 billion refining project in the Indian state of Orissa, but is reported to be considering acquiring a stake in India's Bangalore Refinery. Kuwait Oil Thailand and Thai Petrochemical Industry are planning to build a 300,000-bbl/d refinery in Rayong, Thailand. KPC currently has 250,000 bbl/d of refining capacity in Europe, including half of Agip's 300,000 bbl/d Milazzo refinery. KPC also owns a 75,500-bbl/d unit in Rotterdam. These two refineries enable KPC to supply a large share of its 320,000 bbl/d in European outlets directly. In September 1998, KPC announced the purchase of 157 service stations in Belgium from BP. The move gives KPC an 8% of the retail market share in Belgium. KPC's subsidiary, Kuwait Petroleum International, operates more than 5,000 service stations under the "Q8" banner in 10 countries in Western Europe and about 200 sites in Thailand.

Petrochemicals

Kuwaiti officials have expressed interest in accelerating development of the country's relatively small petrochemical sector. This would accomplish several goals: boosting the value of Kuwait's crude oil reserves; helping to protect Kuwait's revenues during periods of low crude prices; and boosting Kuwaiti revenues while adhering to OPEC crude oil quota limitations. Historically, Kuwait's Petrochemical Industries Company (KPIC) has mainly manufactured low-value products such as urea, ammonia, and fertilizer for export. PIC is now beginning to move upmarket to production of higher-value products.

According to the Kuwait News Agency, PIC may increase production at its polypropylene plant by 20% to 120,000 tons per year if the market price of polypropylene continues to rise. PIC's primary markets are Jordan, Syria, the United Arab Emirates, Morocco, China and Hong Kong, followed by India, Pakistan and countries in eastern Africa.

The EQUATE joint venture, involving PIC and Union Carbide, is the country's largest petrochemical project. The \$2 billion industrial complex at Shuaiba, which came online in 1997, includes a 650,000 metric-ton-per-year ethylene cracker, two polyethylene units with a capacity of 450,000 metric tons per year, and a 350,000 metric-ton-per-year ethylene glycol plant, all of which are currently operating. The complex primarily serves the Asian and European markets. PIC and Union Carbide each have a 45% share in the project, with the remainder owned by Boubyan Petrochemical Company. The EQUATE plant was temporarily shut down by the loss of its ethane feedstock from the Mina al-Ahamdi refinery in June 2000, but has since resumed operation. In April 2001, KPIC approved a \$2 billion plan to construct "Equate II," which would be Kuwait's second petrochemical complex, and would produce olefins.

NATURAL GAS

Kuwait currently produces only a modest quantity of natural gas. Production stood at 330 billion cubic feet (Bcf) in 1998 - most of it associated gas from oil production. Kuwait plans to make a significant increase in its use of natural gas, especially in electricity generation. A switch to gas would free up a substantial amount of oil for export.

Kuwait and Qatar signed a memorandum of understanding (MOU) in July 2000 for export of Qatari gas from its offshore North Field to Kuwait. Qatar Petroleum and ExxonMobil (operator of Qatar's North Field) are negotiating the gas supply deal, and a final agreement is expected to be reached by the end of 2001, with gas beginning to flow in 2005, possibly reaching 1 Bcf/day. The price of this gas has not yet been determined. Besides Qatar, Kuwait also has signed an MOU with Iran for import of gas via pipeline, most likely from its huge South Pars gas field. It is unclear whether both Iranian and Qatari gas import projects could go forward.

Kuwait also hopes to improve its domestic gas production, both through a reduction of flaring of associated gas in oilfields and through new drilling. Exploratory drilling is currently being undertaken at the Rawdhatain oilfield, reaching geological formations much deeper than the oil deposits, which are believed to be gas-rich.

In another gas-related development, Saudi Arabia and Kuwait concluded an agreement in July 2000 on the offshore Dorra gas field, which had been claimed by Saudi Arabia, Kuwait, and Iran. The agreement calls for an equal sharing of the gas resources between Saudi Arabia and Kuwait. Negotiations with Iran over its claims to the Dorra gas field are continuing.

ELECTRICITY

Kuwait has five power stations (Doha East, Doha West, al-Subiya, Shuabia South, and al-Zour South) and a total electrical generation capacity of about 9.3 gigawatts (GW). Kuwait's electricity demand has been growing rapidly in recent years, and is expected to continue increasing at a 7%-9% rate in coming years, necessitating construction of new generating capacity. A 2,400-megawatt (MW), \$2.2 billion thermal plant at al-Subiya came online in 2000, which relieved pressure on the system in the short-term. In September 2000, Kuwait's Ministry of Electricity and Water (MEW), which is in charge of Kuwait's power sector, announced that it would build two new power plants at a total cost of \$2.5 billion. A 1,000-MW, \$422 million, gas-fired plant is to be built at al-Zour North, while a 2,500-MW, \$1.8 billion, steam-powered plant will be built in Shuaiba. Kuwait also has plans to bridge any supply shortfalls by building five, 200-MW gas-fired power plants. To reduce excessive power demand and waste, Kuwait is considering trimming some of its power subsidies. Currently, Kuwaitis pay among the lowest prices for power in the world, and the MEW has urged them to use power more judiciously.

Kuwait continues to expand its national power grid, and has accepted a proposal to link up with the grids of other GCC countries. This grid hookup should provide each GCC country with additional spare capacity to handle peak demand periods.

Sources for this report include: CIA World Factbook 1999; Dow Jones News Wire service; Economist Intelligence Unit ViewsWire; Oil and Gas Journal; Petroleum Economist; Petroleum Intelligence Weekly; International Market Insight Reports; U.S. Energy Information Administration; WEFA Middle East Economic Outlook; World Markets Online.

COUNTRY OVERVIEW

Head of State: Sheikh Jaber al-Ahmad al-Sabah

Crown Prince, Prime Minister: Sheikh Sa'ad al- Abdullah al-Salem al-Sabah

Independence: June 19, 1961 (from United Kingdom)

Population (2001E): 2.0 million (includes 1.2 million non-citizens)

Location/Size: Middle East, northwestern corner of the Persian Gulf between Iraq and Saudi Arabia/6,900 square miles, slightly smaller than New Jersey

Major Cities: Kuwait City (capital), Salmiya, Hawalli

Languages: Arabic

Ethnic Groups: Kuwaiti (45%), other Arab (35%), South Asian (9%), Iranian (4%), other (7%)

Religion: Sunni Muslim (45%), Shi'a Muslim (40%), Christian, Hindu, other (15%)

Defense (8/98): Army (11,000), Air Force (2,500), Navy (1,800), National Guard (5,000)

ECONOMIC OVERVIEW

Currency: Kuwaiti Dinar (KD)

Market Exchange Rate (8/15/01): US\$1 = 0.31 KD

Gross Domestic Product (GDP) (2000E): \$31.7 billion **(2001E):**\$33.4 billion

Real GDP Growth Rate (2000E): 5.5% **(2001E):** 4.0%

Inflation Rate (2000E): 3.1% **(2001E):** 2.9%

Current Account Balance (2000E): \$5.1 billion **(2001E):**\$12.0 billion

Major Trading Partners: United States, Japan, Europe

Merchandise Exports (2001E): \$17.1 billion

Merchandise Imports (2001E): \$7.7 billion

Merchandise Trade Balance (2001E): \$9.4 billion

Major Export Products: Petroleum (90% of total export revenues)

Major Import Products: Industrial goods, consumer goods, machinery, transport equipment, food

Total External Debt (2001E): None

International Reserves (2001E): \$5.9 billion

ENERGY OVERVIEW

Minister of Oil: Adel Khaled al-Subeih (appointed February 2001)

Proven Oil Reserves (1/1/01): 96.5 billion barrels (including 2.5 billion in the Neutral Zone)

OPEC Crude Oil Production Quota (effective September 1, 2001): 1.861 million bbl/d

Oil Production Capacity (2001E): 2.6 million bbl/d (includes half of Neutral Zone)

Oil Production (2000E): 2.2 million bbl/d (includes half of Neutral Zone)

Oil Production (January-May 2001E): 2.2 million bbl/d (includes half of Neutral Zone)

Oil Consumption (2000E): 192,000 bbl/d **(2001E):** 205,000 bbl/d

Net Oil Exports (2000E): 2.0 million bbl/d **(2001E):** 2.0 million bbl/d

Crude Oil Refining Capacity (1/1/01E): 772,800 bbl/d

Major Crude Oil Customers: Asia (around 60%); United States; Europe

Natural Gas Reserves (1/1/01): 52.7 trillion cubic feet (Tcf)(includes Neutral Zone)

Natural Gas Production (1999E): 0.29 Tcf

Natural Gas Consumption (1999E): 0.29 Tcf

Electric Generation Capacity (2001E): 9.3 gigawatts

Electricity Generation (1999E): 31.6 billion kilowatt hours (all thermal)

ENVIRONMENTAL OVERVIEW

Minister of Electricity & Water: Dr. Adil Khalid al-Sabih

Total Energy Consumption (1999E): 0.7 quadrillion Btu* (0.2% of world total energy consumption)

Energy-Related Carbon Emissions (1999E): 12.3 million metric tons of carbon (0.2% of world total carbon emissions)

Per Capita Energy Consumption (1999E): 324.2 million Btu (vs U.S. value of 355.8 million Btu)

Per Capita Carbon Emissions (1999E): 5.8 metric tons of carbon (vs U.S. value of 5.5 metric tons of carbon)

Energy Intensity (1999E): 29,483 Btu/ \$1990 (vs U.S. value of 12,638 Btu/ \$1990)**

Carbon Intensity (1999E): 0.53 metric tons of carbon/thousand \$1990 (vs U.S. value of 0.19 metric tons/thousand \$1990)**

Sectoral Share of Energy Consumption (1998E): Residential (29.9%), Industrial (44.3%), Transportation (25.3%), Commercial (0.5%)

Sectoral Share of Carbon Emissions (1998E): Residential (33.9%), Industrial (40.8%), Transportation (24.7%), Commercial (0.6%)

Fuel Share of Energy Consumption (1999E): Oil (56.3%), Natural Gas (43.7%), Coal (0.0%)

Fuel Share of Carbon Emissions (1999E): Oil (62.9%), Natural Gas (37.1%), Coal (0.0%)

Renewable Energy Consumption (1998E): 0.17 trillion Btu* (17% decrease from 1997)

Number of People per Motor Vehicle (1998): 2.2 (vs U.S. value of 1.3)

Status in Climate Change Negotiations: Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified December 28th, 1994). Not a signatory to the Kyoto Protocol.

Major Environmental Issues: limited natural fresh water resources; some of world's largest and most sophisticated desalination facilities provide much of the water; air and water pollution; desertification.

Major International Environmental Agreements: A party to Conventions on Climate Change, Desertification, Environmental Modification, Hazardous Wastes, Law of the Sea, Nuclear Test Ban, Ozone Layer Protection. Has signed, but not ratified, Biodiversity, Endangered Species and Marine Dumping.

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

**GDP based on EIA International Energy Annual 1999

OIL AND GAS INDUSTRIES

Organization: The *Supreme Petroleum Council* governs the nationalized oil industry, which is run by *Kuwait Petroleum Corporation* (KPC). KPC subsidiaries include: *Kuwait Oil Company* (KOC) - exploration and production of oil and gas; *Kuwait National Petroleum Company* (KNPC) - refining and shipping; *Kuwait Petroleum International* (KPI) - refining and product marketing; *Petrochemical Industries Company* (PIC) - production and marketing of chemical products; *Kuwait Foreign Petroleum Exploration Company* (KUFPEC) - foreign exploration; and *Kuwait Oil Tanker Corporation* (KOTC) - tanker operations

Major Refineries (capacity - bbl/d, 2001E): Mina Al-Ahmadi (326,800 after facility was damaged; design capacity is 435,000 bbl/d), Mina Abdullah (250,000), Shuaiba (196,000)

Major Oil Fields (reserves - billion barrels): Greater Burgan -- Burgan, Magwa, and Ahmadi (50); Raudhatain (6); Sabriya (3.8); Minagish (2); Abdali; Rugei; Bahra; *Neutral Zone:* Al-Hout and Khafji (6.3); Wafra (2); South Fawaris; Umm Gudair

Major Pipelines: Raudhatain-Ahmadi; Minagish-Ahmadi; Umm Gudair-Shuaiba; Wafra-Mina Abdullah; Burgan-Ahmadi

Major Oil Terminals: Mina Al-Ahmadi, Mina Abdullah, Shuaiba, Mina Saud

Foreign Oil Company Involvement: British Petroleum, Chevron, Royal Dutch/Shell, Texaco

Links

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Links to other U.S. Government sites:

[CIA World Factbook - Kuwait](#)

[U.S. Department of Energy's Office of Fossil Energy - Kuwait](#)

[U.S. State Department Consular Information Sheet - Kuwait](#)

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